

Appl. No. 09/854,190
Response dated April 27, 2005
Amendment Accompanying RCE

In the Claims:

Claims 1 and 4 are amended herein. The remaining claims are not amended in this response.

1. (currently amended) A cylindrical straight slab type gas laser comprising:

a pair of cylindrical electrodes of different diameter disposed concentrically by way of spacers, positioned away from peripheral ends of the pair of cylindrical electrodes, to fill the gap between the cylindrical electrodes with laser medium to define a straight slab;

a ring-shaped trick mirror disposed at one end of the straight slab;

an output mirror disposed at the center of the one end of the straight slab to pass part of the light and to reflect a part of the remaining light; and

a w-axicon mirror disposed at the other end of the straight slab, characterized in that the relationship between the center offset X_m and the center position X_0 of the trick mirror is set to $X_0 < X_m = 1.1 X_0$.

2. (previously presented) A cylindrical straight slab type gas laser of claim 1, wherein the output laser beam from the output mirror has a substantially Gaussian distribution when it is focused by the lens.

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3. (previously presented) A cylindrical straight type gas laser of claim 1, wherein the center offset X_m is less than the center position X_0 .

4. (currently amended) A method of constructing a cylindrical straight type gas laser comprising the steps of:
arranging pair of cylindrical electrodes of different diameter concentrically to one another by way of spacers, said spacers positioned away from peripheral ends of said pair of cylindrical electrodes;

arranging a w-axicon mirror at a first end of the cylindrical electrodes;

arranging an output mirror at a second end of and at the center of the cylindrical electrodes for passing a part of the light from the electrodes and for reflecting a part of the remaining light;

arranging a ring shaped trick mirror at the second end of and between the cylindrical electrodes;

filling the space between the cylindrical electrodes with a laser medium;

increasing the intensity of the light surrounding the spacers which passes between the concentric electrodes thereby providing a substantially Gaussian intensity distribution in a far-field image.

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5. (previously presented) A method of constructing a cylindrical straight type gas laser according to claim 4 wherein said step of increasing the intensity is accomplished by using a trick mirror having a relationship between the center offset X_m and the center position X_0 being $X_m \leq 1.1 X_0$.

6. (previously presented) A method of constructing a cylindrical straight type gas laser according to claim 5 wherein the center offset X_m is less than the center position X_0 .